

# *Iowa Seniors Farmers Market Nutrition Program Survey Report*

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## **Overview**

The Seniors Farmers Market Nutrition Program (SFMNP) is designed to promote healthy eating habits through the consumption of fresh fruits and vegetables, to encourage seniors to purchase directly from the farmer, and to support the local farmers who participate in the program.

The SFMNP was offered in Iowa for the first time in 2001. The Iowa Department of Agriculture administered the program through Area Agencies on Aging with assistance from the Departments of Elder Affairs and Public Health. Individual applications for the SFMNP and distribution of the Farmers Market checks were processed at Area Agencies on Aging and congregate meal sites. This process began in June 2001 and continued through October 31, 2001. A total of 13,682 people participated in the SFMNP.

Eligible recipients are 60 years of age or older and meet low-income criteria. Self-certification of low-income status is required. Income guidelines were less than \$15,448 if single and less than \$20,813 if married. The program provided \$28 in \$2 checks to each participant to buy Iowa grown produce directly from the farmer.

## **Nutrition & Health Benefits of SFMNP**

There is ever-growing evidence of the unique health benefits derived from eating fruits and vegetables. Researchers continue to find a strong link between increased fruit and vegetable consumption and the decreased risk of chronic disease such as cancer, heart disease, and stroke. Convincing evidence is also emerging about the positive role of fruit and vegetable consumption and a reduced incidence of cataracts, diverticulosis, and hypertension. The important role of fruits and vegetables in weight management and the control of diabetes also cannot be overlooked. Because of these health benefits, the national goal set by USDA and in the Food Guide Pyramid is to increase fruit and vegetable consumption to 5-9 servings daily. The Behavioral Risk Factor Surveillance System (BRFSS) identified in 2000 that 81.9 percent of Iowans consumed fewer than five servings of fruits and vegetables per day. The 18.1 percentage consuming five servings daily places Iowa second from the bottom in comparison to all states.

In a news release dated January 16, 2001, Senator Larry Craig, ranking member of the U.S. Senate Special Committee on Aging stated, "Many older Americans are at high risk of suffering from poor nutrition, and a poor diet can dramatically jeopardize their health." Senator Craig encourages all seniors to ask their doctor for advice on what to eat and what to avoid. Studies by the American Dietetic Association have found that every dollar spent on nutrition screening and intervention saves at least \$3.25 in health-care costs. "A three to one return on investment is significant, especially when you consider that we spend 99 percent of Medicare dollars on the treatment of chronic conditions. The use of nutrition in the treatment of long-term illnesses could achieve a significant cost savings for taxpayers," said Craig.

### Purposes of the Seniors Farmers Market Survey

The purposes of the 2001 Seniors Farmers Market Survey were to determine current intake of fruits and vegetables of the program participants and to identify if they were familiar with using the Farmers Market Program or buying food directly from farmers. Surveys were conducted prior to the farmers market and three months after the end of the SFMNP.

### Pre-Survey Design

The pre-survey (Attachment 1) consisted of five open-ended questions. The main component of the survey was the fruit and vegetable intake questions. The questions asked reflect the nutrition questions used on the BRFSS. An additional question addresses previous use of the farmers market program. The pre-survey was administered as part of the program application process to reflect fruit and vegetable intake prior to use of the SFMNP.

The Area Agencies on Aging collected completed surveys and mailed them to the Iowa Department of Elder Affairs in September and October. The completed surveys were sent to Iowa Department of Public Health for data entry and analysis. A random sample of surveys were used for analysis. Data from 3,043 surveys (22% of total participants) were analyzed. The number of surveys submitted from each Area Agency on Aging ranged from 43 to 805. Descriptive analyses were conducted using SPSS.

### Post Survey Design

The post-survey (Attachment 2) consisted of 10 questions with three to four choices for answers. Pre-survey questions were repeated in the post-survey design. Additional questions addressed county of residence and usage of SFMNP checks. Space was provided for comments.

The post-surveys were mailed to SFMNP participants from two Area Agencies on Aging and distributed at meal sites in the Des Moines area representing a third Area Agency on Aging. The completed surveys were sent to the Iowa Department of Public Health for data entry and analysis. Data from 681 surveys (5% of total participants) representing 25 counties were analyzed. The number of surveys submitted from each county ranged from 1 to 163. Descriptive analyses were conducted using SPSS.

The post-survey indicates that 76.4 percent of the respondents used all of their checks; 19.2 percent used some of the checks and less than 2 percent did not use their checks. Because of the SFMNP, 85.2 percent (580) of the seniors responding to the survey indicated they ate more fruits and vegetables this past summer; 6.3 percent did not consume more and 6.3 percent were not sure.

Because of the SFMNP, 73.9 percent (503) of those surveyed continued to shop at the Farmers Market after they had used all of their SFMNP checks; 17.2 percent did not continue shopping and 4.4 percent were not sure. Because of the SFMNP, 44.8 percent (305) of the respondents said they tried new fruits and vegetables as a result of the Seniors Farmers Market program; 43.3 percent did not try new fruits and vegetables and 7.5 percent were not sure.

Figure 1: Ate More Fruits and Vegetables as Result of SFMNP (n=681)

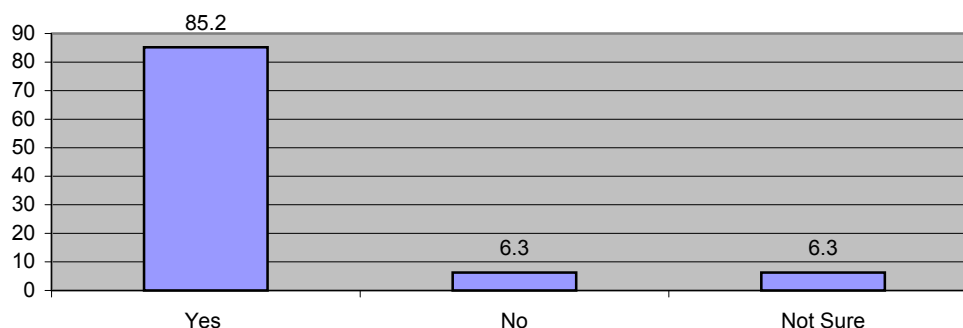
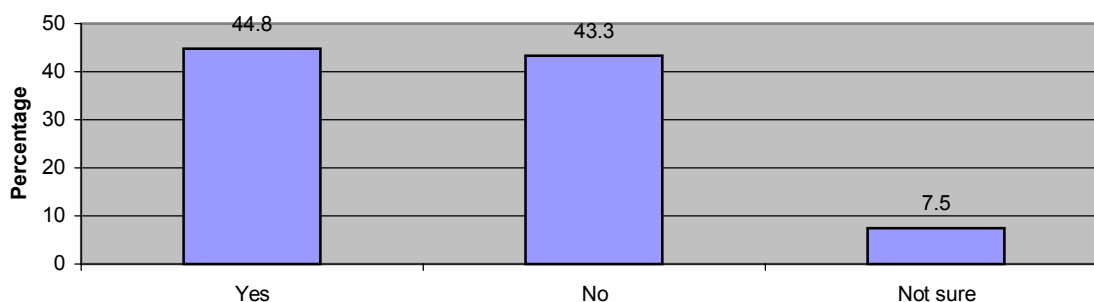


Figure 2: Bought Fresh Fruits and Vegetables Never Tried Before (n=681)



Following is a comparison of the pre-survey results with the post-survey results:

#### **Not counting juice, how many servings of fruit do you eat daily?**

In the pre-survey, 22.2 percent (676) consumed one or less servings of fruit daily; 60.4 percent of the respondents consumed two to three servings of fruit daily; 11.7 percent consumed four to five servings and 2.2 percent more than five servings. The largest number of respondents (35.7%) consumed two fruit servings daily.

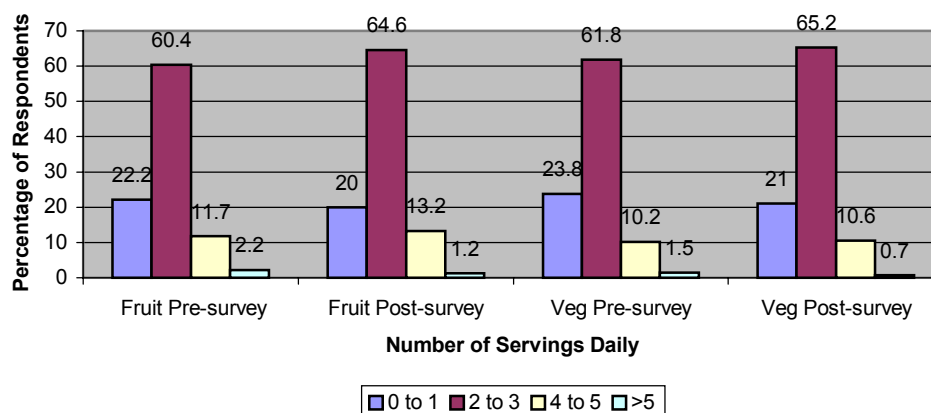
In the post-survey the highest percentage of respondents (64.6 %) indicated they consume two to three servings of fruit daily. Twenty percent consumed zero to one servings of fruit daily; 13.2 percent consumed four to five servings and 1.2 percent consumed more than five fruits daily.

#### **Not counting potatoes or salad, how many servings of vegetables do you eat daily?**

In the pre-survey 23.8 percent (724) consumed one or less servings of vegetables daily; 61.8 percent consumed two to three servings of vegetables daily; 10.2 percent consumed four to five servings and 1.5 percent consumed more than five servings. The largest number of respondents (41.7%) consumed two servings of vegetables daily

In the post-survey the highest percentage of respondents was 65.2 percent (444) who indicated they ate two to three servings of vegetables daily. Twenty-one percent ate zero to one; 10.6 percent consume four to five servings of vegetables and 0.7 percent have more than five servings daily.

Figure 3: Fruit and Vegetable Intake Comparison Using Pre and Post SFMNP Surveys (n=pre 3043, post 681)



### Do you eat fruit for a snack?

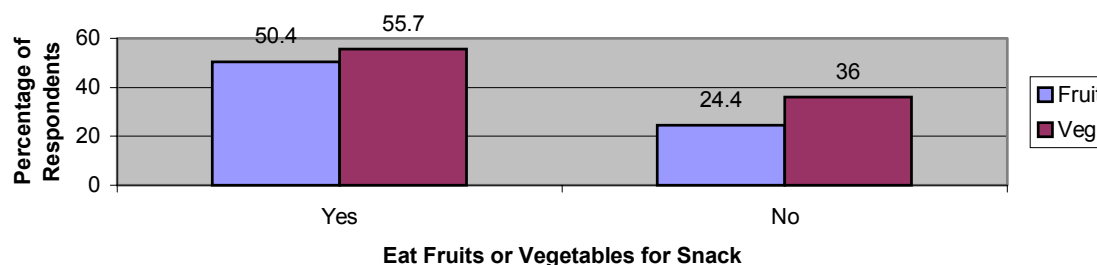
Nearly 88 percent (2,673) indicated they eat fruit for a snack in the pre-survey. For this group indicating they eat fruit for a snack, the average intake is 2.49 servings of fruit and 2.33 servings of vegetables a day. Of the individuals consuming five or more servings of fruits and vegetables daily, 50.4 percent indicate they consume fruit for a snack.

Post-survey results showed that nearly 92 percent (624) of the respondents consumed fruit for a snack.

### Do you eat vegetables for a snack?

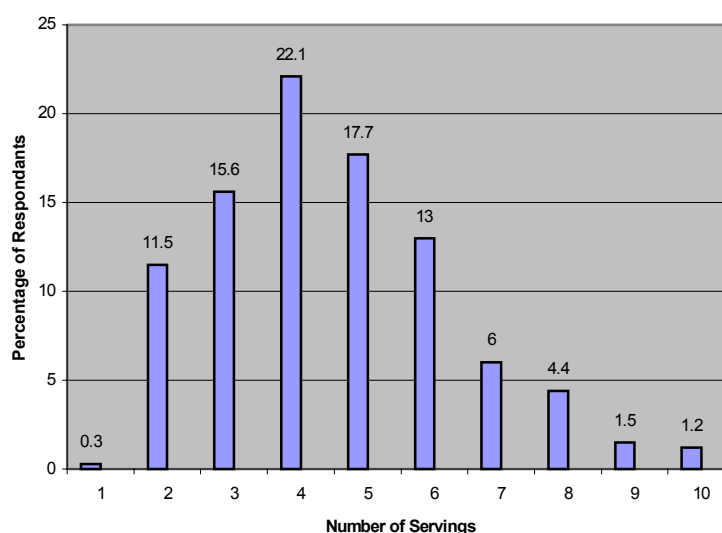
In the pre-survey almost 58 percent (1,756) of the seniors indicated they eat vegetables for a snack. For this group, the average intake is 2.59 servings of fruits and 2.49 servings of vegetables. Of the individuals consuming five or more servings of fruits and vegetables daily, 55.7 percent eat vegetables for a snack. Almost 59 percent (400) of the seniors participating in the post-survey indicated they ate vegetables for a snack.

**Figure 4: Frequencies of Fruits or Vegetables as Snacks at Pre-Survey for Respondents Consuming Five or More Servings of Fruits and Vegetables (n=1380)**



The largest number of individuals (22.1%) in the pre-survey indicated they consume four servings of fruits and vegetables daily followed by 17.7 percent consuming five servings. In the pre-survey 67.5 percent and 67.4 percent in the post-survey consumed four or more servings of fruits and vegetables daily.

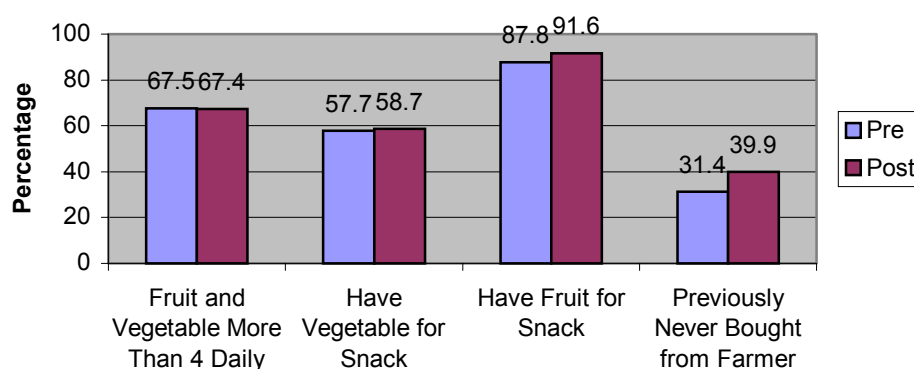
**Figure 5: Servings of Fruits and Vegetables Eaten Daily (n=2892)**



### Have you previously bought produce directly from a farmer?

In the pre-survey 31 percent (956) of the SFMNP identified that they had not previously bought fresh produce directly from a farmer. In the post-survey almost 40 percent (272) had not previously bought directly from a farmer and 58.6 percent indicated they had previously bought fresh produce directly from a farmer.

Figure 6: Comparison of Pre and Post Surveys (n=pre 3043, post 681)



### Summary

The SFMNP promoted healthy eating habits as evidenced by seniors reporting they ate more fruits and vegetables and they bought fruits and vegetables they had never tried before as a result of the program. Purchasing fresh fruits and vegetables directly from the farmer was a new experience for 31 percent in the pre-survey and 40 percent in the post-survey of the SFMNP participants. The increase from 31 to 40 percent from pre to post survey may reflect a change in perception of buying directly from a farmer as a result of experiencing a farmers' market. Once introduced to the farmers' market, 73.9 percent of the seniors continued buying produce at the farmers' market even when they had used all of the SFMNP checks. The majority of participants used all of the checks they received. The post-survey identified 76.4 percent (520) used all of their SFMNP checks.

The consumption of fruits and vegetables by SFMNP participants showed a slight but not significant increase when comparing pre and post surveys. For seniors who consumed four or more servings of fruits and vegetables daily there was no change between the two surveys. There may have been a bias with the small sample size of the post-survey and not enough evidence to demonstrate an increase in fruit and vegetable intake as a result of the SFMNP. Sixty-seven percent consumed four or more servings daily.

The pre-survey identified 43.8 percent consumed five or more servings daily. This is above the 18.1 percent for the entire population of Iowa. The higher percentage of the SFMNP participants may reflect preference for fruits and vegetables, whereas, individuals who do not eat fruits and vegetables may not have participated. The pre and post survey obtained similar results for SFMNP participants having vegetables for a snack and fruit for a snack. Seniors who eat fruits and vegetables for snacks tend to consume a higher total number of servings of fruits and vegetables for the day.

To increase the percentage of low-income seniors who consume five or more servings of fruits and vegetables daily, educational programs are needed. Previous studies have identified barriers to eating five servings a day to include preparation time. The program "Pick a Better Snack" focusing on the ease of using fruits and vegetables for snacks would be appropriate to use with SFMNP participants since the majority of the seniors accept fruits and vegetables as a snack.

The SFMNP provides the opportunity for seniors to obtain fresh fruits and vegetables and expand the variety of fruits and vegetables they eat. The SFMNP combined with nutrition education has the potential for increasing fruit and vegetable intake in low-income Iowa seniors.

#### **Recommendations:**

- Continue Seniors Farmers Market program
- Increase individual allocation above \$28 per person.
- Provide education on the health benefits of eating five servings of fruits and vegetables daily.
- Promote the "Pick a Better Snack" educational materials to the seniors.

#### **References:**

- Iowa Department of Agriculture and Land Stewardship. *Iowa Seniors Farmer's Market Nutrition Program: Administrative procedures*. 2001
- Iowa Department of Public Health. *Healthy Iowans 2010: Advancing the boundaries of healthy living and the quality of life in the new decade*. January 2000. Available at <http://www.idph.state.ia.us>.
- Schafer, E, Nelson, D, Iowa Nutrition Education Network social marketing research report: recommendations for delivering nutrition and physical activity messages to low-income parents of children aged 2-12 years. Ames, IA: Iowa State University Extension; 1999.
- U.S. Department of Agriculture. *The Food Guide Pyramid: A guide to daily food choices*. Washington, DC: Human Nutrition Information Service; 1992. Home and Garden Bulletin No.249.
- U.S. Department of Health and Human Services. *Healthy People 2010*. Available at <http://www.health.gov/healthypeople/default.htm>.
- *With new Medicare coverage for nutrition, doctors and dietitians are encouraged to screen elderly for nutritional needs*. Press release from Craig\_AgingNews@aging.senate.gov. January 16, 2002.
- Wolfe W, Frongillo E, Cassano P. Evaluating brief measures of fruit and vegetable consumption frequency and variety: Cognition, interpretation, and other measurement issues. *J. Am Diet Assoc.* 2001;101:311-318.

#### **Acknowledgements**

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## Attachment 1

**Pre Survey**

Please answer the following questions. The information you provide will help evaluate the benefits of the Iowa Seniors Farmers Market Nutrition Program. Write your answer in the blanks and circle either **yes** or **no**. Place the complete form in the box provided at your meal site.

1. Not counting juice, how many servings of fruit do you eat daily? \_\_\_\_\_
2. Not counting potatoes or salad, how many servings of vegetables do you eat daily? \_\_\_\_\_
3. Do you eat fruit for a snack?                      **Yes**                      **No**
4. Do you eat vegetables for a snack?           **Yes**                      **No**
5. Have you previously bought fresh produce directly from a farmer?    **Yes**                      **No**

## Attachment 2

**Post-Survey**

Please answer the following questions. The information you provide will help evaluate the benefits of the Iowa Seniors Farmers Market Nutrition Program. Write your answers in the blanks or check the correct box.

1. In what county do you live? \_\_\_\_\_
2. How many of your Senior Farmers Market Nutrition Program checks did you use?

Because of the Farmers Market Nutrition Program, I . . .

3. Ate more fresh fruits and vegetables this past summer than usual.    **Yes**    **No**
4. Continued to shop at farmers markets, even without checks to spend there.    **Yes**    **No**
5. Bought a fresh fruit or vegetable that I had never tried before.            **Yes**    **No**
6. Not counting juice, how many servings of fruit do you eat daily? \_\_\_\_0-1\_\_\_\_2-3\_\_\_\_4-5\_\_\_\_5+
7. Not counting potatoes or lettuce salad, how many servings of vegetables do you eat daily? \_\_\_\_0-1\_\_\_\_2-3\_\_\_\_4-5\_\_\_\_5+
8. Do you eat fruit for a snack?                      **Yes**                      **No**
9. Do you eat vegetables for a snack?           **Yes**                      **No**
10. Have you previously bought fresh produce directly from a farmer?    **Yes**                      **No**